

Listing of Claims:

1. (Previously Presented) A computerized system comprising a program modification database for providing substitute program segments for particular identified programs at program load time, each identified program and each substitute program segment comprising at least one computer-executable instruction, the database comprising:
 - a set of substitute program segments;
 - a set of program entries specifying correction information for such particular identified programs, wherein individual ones of the set of program entries comprise:
 - a whole name matching at least one existing executable program;
 - a program matching criteria matching at least one existing executable program to be updated by performing a first partial name search within an index followed by a second whole name search within the set of program entries specifying correction information; and
 - a reference to at least one substitute program segment in the set of substitute program segments; and
 - the index including a set of identifiers, wherein each identifier identifies one of the set of program entries, and wherein each identifier comprises a name portion of the whole name.
2. (Original) The program modification database of claim 1 wherein ones of the set of identifiers comprise text strings corresponding to at least a portion of a program name.

3. (Original) The program modification database of claim 1 further comprising a preliminary search function for comparing ones of the set of identifiers to corresponding information for a program to identify potential matching entries in the set of program entries.

4. (Original) The program modification database of claim 3 wherein the corresponding information comprises at least a portion of a program name.

5. (Original) The program modification database of claim 1 wherein the set of substitute program segments includes a program interface.

6. (Original) The program modification database of claim 1 wherein individual ones of the set of program entries include a program name.

7. (Original) The program modification database of claim 6 wherein the programming matching criteria includes at least one file metadata-based criterion.

8. (Original) The program modification database of claim 1 wherein the set of potential set of criterion types for specifying a particular program matching criteria is extensible.

9. (Original) The program modification database of claim 8 wherein programming matching criterion types are specified by XML tags.

10. (Original) The program modification database of claim 1 further comprising a library section specifying one or more program files, including one or more substitute program segments, to be loaded into a process space by a program loader when the operating system loads the computer program.

11. (Original) The program modification database of claim 1 further comprising one or more explicit exclude instructions having a reference to a calling module for which program segment substitution is not implemented.

12. (Original) The program modification database of claim 11 further comprising one or more explicit include instructions having a reference to a calling module for which a more general explicit exclude instruction is overridden, thereby enabling program segment substitution for the particular calling module.

13. (Original) The program modification database of claim 1 further comprising a search function for comparing matching criteria of the individual ones of the set of program entries to a program to identify a match.

14. (Cancelled)

15. (Original) The program modification database of claim 1 wherein the set of substitute program segments is stored in a read-only memory.

16. (Original) The program modification database of claim 1 wherein the set of program entries is stored in a read-only memory.

17. (Original) The program modification database of claim 1 wherein the set of substitute program segments include substitute executable program interfaces.

18. (Original) The program modification database of claim 1 wherein the set of substitute program segments include program patches.

19. (Original) The program modification database of claim 1 wherein the set of substitute program segments are stored in a common memory location referenced by differing ones of the set of program entries.

20. (Previously Presented) A method for providing modification segments for a particular executable program at load time in a computer system including a program

modification database having a set of program entries, wherein each program entry includes a program matching criteria and a reference to at least one substitute program segment, and wherein each executable program and each substitute program segment comprises at least one computer-executable instruction, the method comprising the steps of:

multi-tiered matching of identification information for the particular executable program to a program matching criteria for an entry within the set of program entries, the multi-tiered matching step comprising the sub-steps of:

first at program loading for execution executing a first search on a name portion of a whole name of an index having identifying information for each one of the set of program entries to identify a first set of potential matching entries;

second at program loading for execution executing a second search on at least a portion of the first set of potential matching entries to identify a second set of potential matching entries matching the particular executable program based upon a whole name for the program entry; and

third at program loading for execution executing a third search on at least a portion of the second set of potential matching entries to identify a program entry matching the particular program based upon the program matching criteria for the program entry;

accessing within the entry, in response to the matching step, a sub-field identifying substitute program segments for the particular executable program; and

providing memory location references for reading the identified substitute program segments based upon the accessing step.

21. (Cancelled)

22. (Cancelled)

23. (Cancelled)

24. (Original) The method of claim 20 wherein the index is stored as a packed data structure.

25. (Original) The method of claim 20 wherein the program matching criteria includes comparing file metadata.

26. (Original) The method of claim 20 wherein types of matching information for the program matching criteria are designated by XML tags.

27. (Original) The method of claim 20 wherein the set of potential types of matching information for the program matching criteria is extensible.

28. (Previously Presented) A computer-readable medium having computer-executable instructions for providing modification segments for a particular executable program at load time in a computer system including a program modification database

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having a set of program entries, wherein each program entry includes a program matching criteria and a reference to at least one substitute program segment, and wherein each executable program and each substitute program segment comprises at least one computer-executable instruction, the computer-executable instructions facilitating performing the steps of:

multi-tiered matching identification information for the particular executable program to a program matching criteria for an entry within the set of program entries, the multi-tiered matching step comprising the sub-steps of:

first at program loading for execution executing a first search on a name portion of an index having identifying information for each one of the set of program entries to identify a first set of potential matching entries;

second at program loading for execution executing a second search on at least a portion of the first set of potential matching entries to identify a second set of potential matching entries matching the particular executable program based upon a whole name for the program entry; and

third at program loading for execution executing a third search on at least a portion of the second set of potential matching entries to identify a program entry matching the particular program based upon the program matching criteria for the program entry;

accessing within the entry, in response to the matching step, a sub-field identifying substitute program segments for the particular executable program; and

providing memory location references for reading the identified substitute program segments based upon the accessing step.

29. (Cancelled)

30. (Cancelled)

31. (Cancelled)

32. (Original) The computer-readable medium of claim 28 wherein the index is stored as a packed data structure.

33. (Original) The computer-readable medium of claim 28 wherein the program matching criteria includes comparing file metadata.

34. (Original) The computer-readable medium of claim 28 wherein types of matching information for the program matching criteria are designated by XML tags.

35. (Original) The computer-readable medium of claim 28 wherein the set of potential types of matching information for the program matching criteria is extensible.

36. (Original) Apparatus comprising the program modification database of claim 1.

37. (Original) Apparatus comprising the computer-readable medium of claim 28.

38. (Previously Presented) The program modification database of claim 13 wherein the search function comprises procedures for executing a multi-tiered executable program matching scheme to locate a matching entry within the set of program entries for a particular program, the procedures comprising:

a first procedure executing a first search on the name portion of an index having identifying information for each one of the set of program entries to identify a first set of potential matching entries;

a second procedure executing a second search on at least a portion of the first set of potential matching entries to identify a second set of potential matching entries matching the particular program based upon the whole name for the program entry; and

a third procedure executing a third search on at least a portion of the second set of potential matching entries to identify a program entry matching the particular program based upon the program matching criteria for the program entry.

39. (Previously Presented) The method of claim 20 wherein the name portion of the index having the identifying information comprises a limited number of characters corresponding to names of programs for which entries are present in the program modification database.

40. (Previously Presented) The computer-readable medium of claim 28 wherein the name portion of the index having the identifying information comprises a limited number of characters corresponding to names of programs for which entries are present in the program modification database.